

56-6-34/47

Interpretation of the "Anomalous" Representation of the Inversion Groups

ASSOCIATION: Moscow State University
(Moskovskiy gosudarstvennyy universitet)

SUBMITTED: July 12, 1957

AVAILABLE: Library of Congress

Card 2/2

20-114-6-19/54

AUTHOR: Sokolik, G. A.

TITLE: On the Connection Between Ordinary Space and Isotopic Space
(K voprosu o svyazi mezhdru obychnym i izotopicheskim pro-
stranstvami)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 6, pp. 1206-1209 (USSR)

ABSTRACT: The author here discussed a mathematical method suitable for the construction of a connection between the ordinary space and the isotopic space. The author starts from the assumption that the isotopic spin and the other constants of the charge group can be interpreted as inner degrees of freedom of the particle. In this case the particle can be described by equations by A. Pais, Physica, Vol. 19, 8, 69 (1953) and also by generalized equations for particles with any spatial and isotopic spin. In this connection the theory of those equations is developed which generalize the just mentioned equations; they have the formula

$$\left(\Gamma_i \frac{\partial}{\partial x_i} + x \right) \Psi = 0 \quad (i = 1, 2, \dots, n)$$

Card 1/3

The author here seeks all those equations which are invariant

20-114-6-19/54

On the Connection Between Ordinary Space and Isotopic Space

the inversions of coordinates. There are 8 references, 5 of which are Slavic.

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

PRESENTED: February 13, 1957, by N. N. Bogolyubov, Member of the Academy

SUBMITTED: February 12, 1957

Card 3/3

67519

SOV/155-59-1-24/30

~~16(1), 24(5)~~ 24, 2300

AUTHOR: Sokolik, G.A.

TITLE: Generalization of the Lorentz Group

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki,
1959, Nr 1, pp 158-164 (USSR)

ABSTRACT: In [Ref 1,2,3] the n-dimensional rotation group was used as a generalization of the Lorentz group and a classification of the wave equations being invariant with respect to this group was given. The author states that the theory of wave equations can be established on the base of the unimodular group (group of matrices Γ , $\det \Gamma = 1$) and he considers the classification of the wave equations with respect to the representations of this group.

The author thanks O.A. Germogenova for a valuable discussion.

There are 8 references, 3 of which are Soviet, 3 Italian, 1 French, and 1 American.

ASSOCIATION: Magnitnaya laboratoriya AN SSSR (Magnetic Laboratory AS USSR)

SUBMITTED: December 26, 1958

Card 1/1

28

67520

SOV/155-59-1-25/30

24.6600
16(1), 24(5)

AUTHOR: Sokolik, G.A.

TITLE: New Formulation of the Fusion Theory 79

PERIODICAL: Nauchnyye doklady vysshey shkoly, Fiziko-matematicheskkiye nauki, 1959, Nr 1, pp 165-167 (USSR)

ABSTRACT: In the present paper the author gives a new mathematical interpretation of the fusion theory of de Broglie. The author starts from the classification of the equations

$$(1) \quad \Gamma_i \frac{\partial \psi}{\partial x_i} + m\psi = 0 \quad | i = 1, 2, \dots, n |$$

in [Ref 4]. The condition of the invariance of (1) with respect to the group of rotations and reflections of the n-dimensional space can be formulated as follows: (1) is invariant then and only then if the representation with respect to which ψ is transformed, is a representation of the n-dimensional subgroup O_{n+1} . This result and some similar results are used for the formulation of the fusion theory for particles with an arbitrary spin, isospin etc. Let the equations

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New Formulation of the Fusion Theory

SOV/155-59-1-25/30

$$(5) \quad \Gamma_i^{(j)} \frac{\partial \psi^{(j)}}{\partial x_i} + m \psi^{(j)} = 0 \quad \begin{matrix} j = 1, 2, \dots, n \\ i = 1, 2, \dots, n \end{matrix}$$

be given by the representations R_1, R_2 of the group O_{n+1} .
The equation which corresponds to $R_1 \times R_2$ is called a fusion equation. Thereby the problem of the determination of the equation which describes $\psi_i \times \psi_j$ is reduced to the decomposition of the direct product $R_1 \times R_2$ into irreducible representations (see author [Ref 8 7]).
There are 8 references, 5 of which are Soviet, 1 Italian, 1 French and 1 American.

ASSOCIATION: Magnitnaya laboratoriya AN SSSR (Magnetic Laboratory AS USSR)

SUBMITTED: December 26, 1958

Card 2/2

24(5)

SOV/56-36-4-21/70

AUTHOR:

Sokolik, G. A.

TITLE:

A New Class of Representations of the Total Lorentz Group (Novyy klass predstavleniy polnoy gruppy Lorentsa)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 4, pp 1098-1102 (USSR)

ABSTRACT:

In the introduction, the themes of several publications connected with this paper are discussed in short. In the present paper the author shows that all representations of the total Lorentz group can be reduced to direct products of spinors. These spinors belong to three classes; they are of the following form:

$$T_{01} = \begin{pmatrix} 0 & I \\ I & 0 \end{pmatrix} \quad T_{10} = \begin{pmatrix} 0 & iI \\ iI & 0 \end{pmatrix} \quad T_{11} = \begin{pmatrix} iI & 0 \\ 0 & iI \end{pmatrix} \quad (1)$$

$$T_{01} = \begin{pmatrix} 0 & I \\ I & 0 \end{pmatrix} \quad T_{10} = \begin{pmatrix} 0 & -I \\ I & 0 \end{pmatrix} \quad T_{11} = \begin{pmatrix} I & 0 \\ 0 & -I \end{pmatrix} \quad (2)$$

$$T_{01} = \begin{pmatrix} 0 & -iI \\ iI & 0 \end{pmatrix} \quad T_{10} = \begin{pmatrix} 0 & iI \\ iI & 0 \end{pmatrix} \quad T_{11} = \begin{pmatrix} I & 0 \\ 0 & -I \end{pmatrix} \quad (3)$$

Card 1/3

Representation (1) is normal (commutating), (2) and

A New Class of Representations of the Total Lorentz Group

SOV/56-36-4-21/70

(3) are anomalous (anticommutating). The operators T_{01} , T_{10} , and T_{11} are satisfied by the relation $T_{10} T_{11} = T_{01}$; $T_{10} T_{01} = T_{11}$ acting upon the bispinor $(x_1 x_2 \bar{x}_1 \bar{x}_2)$; T_{01} , T_{10} , and T_{11} correspond to time, space, and space-time inversion respectively. By means of these representations, several practical examples are investigated. The attempt is made to interpret isotopic spin in terms of the generalized parity operator without introducing new degrees of freedom. For D_{jk}^+ and D_{kj}^+ as well as for D_{jk}^- and D_{kj}^- and other operators an explicit representation of the spinors of classes (1), (2), and (3), by which they are described, is given. For two given pseudoscalars the doublet representation is derived, and it is found that the latter can be interpreted as one of the isotopic doublets of the K-meson. It is also shown that for spinors a time inversion of a charge conjugation is equivalent. The author finally thanks O.A. Germogenova and A. M. Brodskiy for advice and discussions. There are

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A New Class of Representations of the Total Lorentz
Group

SOV/56-36-4-21/70

8 references, 6 of which are Soviet.

SUBMITTED: July, 14, 1958 (initially) and September 24, 1958
(after revision)

Card 3/3

BRODSKIY, A.M.; IVANENKO, D.; SOKOLIK, G.A.

New interpretation of the gravitational field. Zhur. eksp. i teor.
fiz. 41 no. 4: 1307-1309 0 '61. (MIRA 14:10)

1. Moskovskiy gosudarstvennyy universitet.
(Gravitation)

BRODSKIY, A. M., IVANENKO, D. D., SOKOLIK, ^GH. A.

"A New Conception of the Gravitational Field"

report presented at the Intl. Conference on Relativistic Theories of
Gravitation, Warsaw, Poland, 25-31 July 1962.

Faculty of Physics, Moscow State University, Moscow, USSR,

SOKOLIK, G.A.

Representations of the general Lorentz group and the
classification of relativistic equations. Izv. vys. ucheb.
zav.; fiz. no.5:54-59 '62. (MIRA 15:12)

1. Akademiya nauk SSSR, Magnitnaya laboratoriya.
(Groups, Theory of)
(Spinor analysis)

BRODSKII, A.N. [Brodskiy, A.M.]; IVANENKO, D.; SOKOLIK, H.A. [Sokolik, G.A.]

A new conception of the gravitational field. Acta phys Hung 14 no.1:
21-25 '62.

1. Faculty of Physics, Moscow State University, Moscow, USSR.

S/020/63/148/003/012/037
B125/B102

AUTHOR: Sokolik, G. A.

TITLE: Theory of compensating fields

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 3, 1963,
549-551

TEXT: This paper studies the non-tensor character of fields and their transformation properties on finite transformation of a local group, already treated in a previous paper by A.M. Brodskiy et al. (ZhETF, 41, no. 10, 1961). This renders the considerations more correct, for the Lie theorem does not cover local groups. The commutation rules for the infinitesimal operators of the group are determined by the structure

constants $c_{ij,sp}^{ml} = \delta_{js}\delta_{im}\delta_{pi} + \delta_{jp}\delta_{sm}\delta_{il} + \delta_{is}\delta_{pm}\delta_{ji} + \delta_{ip}\delta_{sm}\delta_{il}$. If

the wave field equation $(\square_0(p)L_p\delta_\sigma + im)\psi = 0$ is covariant, then the general gravitational interaction $\Gamma_\sigma = (1/2)\hat{I}_{mn}\Delta_\sigma(m,n)$ can also be

Card 1/2

Theory of compensating fields

S/020/63/148/003/012/037
B125/B102

derived without employing parallelism. Γ_{σ} retains its form even when the frame of reference undergoes infinitesimal rotation $\Omega_{\nu}(1) = L_{11}, \Omega_{\nu}(1')$. But the tensor part of the coefficients of Γ_{σ} cannot be obtained in explicit form by the compensating field method. ✓

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki (All-Union Scientific Research Institute of Electromechanics)

PRESENTED: July 27, 1962, by N.M. Bogolyubov, Academician

SUBMITTED: July 2, 1962

Card 2/2

ACCESSION NR: AP4012081

S/0020/64/154/002/0310/0312

AUTHORS: Sokolik, G.A.; Konopleva, N.P.

TITLE: Design theory for compensating fields

SOURCE: AN SSSR. Doklady*, v. 154, no. 2, 1964, 310-312

TOPIC TAGS: mathematical physics, compensating field, compensating field design theory, balancing field, electromechanics, Lorentz group, Neter theorem, free field Lagrangian, Lagrangian, Abelian group

ABSTRACT: This is an attempt to find an effective form of compensating fields as coherence coefficients in a space with intrinsic degrees of freedom. The local calibration group $x' = (x) \psi$,

$$S = \exp [e_a(x) I_a]; \quad [I_a, I_b] = C_{ab} I_c$$

is examined. Simplifying the Neter theorem for the case of a local group, we get

$$\begin{aligned} \mathcal{L} &= \mathcal{L}(\psi; \nabla_i \psi), \quad \nabla_i = \partial_i - A_i^a I_a, \\ \delta \mathcal{L} &= \frac{\partial \mathcal{L}}{\partial \psi} \delta \psi + \frac{\partial \mathcal{L}}{\partial \nabla_i \psi} \delta \nabla_i \psi = 0. \end{aligned} \quad (1)$$

Expanding $\delta \mathcal{L}$ and considering
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ACCESSION NR: AP4012081

$$\nabla_i \frac{\partial \mathcal{L}}{\partial \nabla_i \psi} - \frac{\partial \mathcal{L}}{\partial \psi} = 0, \quad [\delta \delta] = 0,$$

we obtain

$$\frac{\partial}{\partial x_i} \left(\frac{\partial \mathcal{L}}{\partial \nabla_i \psi} \right) = A_i^c C_{cb}^a l^b. \quad (3)$$

Considering the free field Lagrangian $L_0[A_1^0]$, in which A_1^0 enters only as a tensor, $F_{ik}^a = (\partial_i A_k^a - \partial_k A_i^a) - \psi_i C_{bc}^a (A_i^b A_k^c - A_k^b A_i^c)$.

transforming with respect to the adjoint group of the calibration group

owing to which \mathcal{L} retains the gauge invariance, and the uniform principle of invariance is replaced by the inhomogeneous $\partial_i J_1^a + f^a = A_1^0$. So that A_1^0 could be expressed effectively, the relation $\delta A_a = \epsilon_a C_{ab}^c \chi_b$, where χ_a assign the basis of the adjoint group $\chi_a = C_{ac}^b \chi_b \partial_c$ is made use of. Then

$$A_i^a = C_{ac}^b \Omega_b \partial_i \Omega_c, \quad C_{ac}^b C_{cd}^e \Omega_b \Omega_c = \delta_{ad}.$$

The values Ω_a can be examined as a frame of reference defined in a space of intrinsic degrees of freedom. "In conclusion, authors wish to thank Prof. K. P. Stanyukovich for his interest in this work and valuable discussions." Orig. art. has: 6 equations.

ASSOCIATION: Nauchno-issledovatel'skiy institut elektromekhaniki
(Scientific-Research Institute for Electromechanics)
Card 2/3

ACCESSION NR: AP4012081

SUBMITTED: 31Aug63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: MM, PH

NR REF SOV: 005

OTHER: 003

Card 3/3

ACCESSION NR: AP4013325

S/0020/64/154/003/0565/0566

AUTHOR: Sokolik, G. A.

TITLE: Spinor presentation of gravitational fields

SOURCE: AN SSSR. Doklady*, v. 154, no. 3, 1964, 565-566

TOPIC TAGS: spinor presentation, gravitational fields, general relativity theory, compensating field method

ABSTRACT: The author's method (DAN 148 #3, 1963) of compensating fields is extended to spinor quantities. Previous attempts by L. Witten (Phys. Rev. 113, 357, 1959) in the construction of a spinor theory of gravitation was unsuccessful. In the present paper the connection between the invariant derivative induced by the local Lorentz group and the spinor invariant derivatives is pointed out. Orig. art. has: no figures, 5 equations.

ASSOCIATION: Nauchno-issledovatel'skiy institut electromekhaniki (Research

Card 1/2

ACCESSION NR: AP4013325

Institute for Electromechanics)

SUBMITTED: 31Aug63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 001

OTHER: 002

Card 2/2

L 21086-65 EWT(1) ASD(p)-3/ESD(t)/IJP(c)
ACCESSION NR: AP5001983 S/0020/64/159/006/1261/1263

AUTHORS: Iosif'yan, A. G. (Academician AN ArmSSR); Stanyukovich,
K. P.; Sokolik, G. A.

TITLE: Analysis of quasi-Maxwellian equations describing compen-
sating fields

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1261-1263

TOPIC TAGS: Maxwell equation, linear equation, gravitation, com-
pensating field

ABSTRACT: This paper deals with general quasi-linear equations for
an arbitrary field. These equations were first introduced for the
case of gravitation in a paper by one of the authors (Iosif'yan,
Voprosy* yedinoi teorii elektromagnitnogo i gravitatsionno-iner-
tsial'nogo polei [Problems of Unified Theory of Electromagnetic and
Gravitational Fields], Yerevan, 1959). Equations of this type are

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L 21086-65

ACCESSION NR: AP5001983

derivable in natural fashion from the Noether theorem, and the authors formulate this theorem for local gauge transformations. Two pairs of quasi-Maxwellian equations are then derived for the case of gravitational field, having the advantage that their quasi-Maxwellian character is retained even in a strong gravitational field, and the nonlinearity is contained in its entirety in the expression for the current. This nonlinear expression can be used for the description of gravitational waves. Orig. art. has: 8 formulas. "The authors thank N. P. Konopleva whose discussions and ideas stimulated the writing of this paper."

ASSOCIATION: None

SUBMITTED: 15Apr64

ENCL: 00

SUB CODE: GP

NR REF SOV: 004

OTHER: 001

Card 2/2

GORODIK, Gensikh Abramovich; KHECVA, L.V., red.

[Group methods in the theory of elementary particles]
Gruppevyte metody v teorii elementarnykh chastits. Moskva, Atomizdat, 1965. 174 p. (MIRA 18:9)

PROTEGA, Aleksandar, sanitetski potpukovnik dr.; KRALJEVIC, Ijubomir,
sanitetski pukovnik docent dr.; DITRIH, Zvonimir, sanitetski
kapetan dr.; SOZOLIC, Josip, sanitetski kapetan dr.; JAKOBUSIC,
Augustin, dr.; RAJCIC, Aleksandar, sanitetski kapetan dr.ph.

Local cooling of the kidney in surgical practice. Experimental
studies. Vojnosanit. pregl. 22 no.12:758-760 D '65.

1. Bolnica armijske oblasti u Splitu; Kirursko odjeljenje,
Prosektura; Klinicki laboratorij.

SOKOLIK, L. I.

Name: SOKOLIK, L. I.

Dissertation: Experience in the fluorographic exposure of anthracosilicosis. (From material on comprehensive prophylaxis studies of workers in the mines of Novoshakhtinskiy Rayon in 1952-1954)

Degree: Cand Med Sci

Defended *At* ~~Location~~: Health Institutions of the Novoshakhtinskiy Mines Section of Public Health. Rostov-on-Don State Medical Inst, Chair of Roentgenology and Radiology

Publication

~~Defense~~ Date, Place: 1956, Rostov-on-Don

Source: Knizhnaya Letopis', No 47, 1956

SOKOLIK, N.I.

Effect of irrigation on thermal conditions of the surrounding
area. Trudy GGO no. 77:34-42 '58. (MIRA 12:4)
(Irrigation) (Atmospheric temperature)

NESMEYANOV, Aleksandr Nikolayevich; SOKOLIK, Rozaliya Abramovna;
KOCHESHKOV, K.A., otv. red.; OKHLOBYSTIN, O.Yu., red.;
NOVICHKOV, N.D., tekhn. red.

[Methods of metallo-organic chemistry; boron, aluminum,
gallium, indium, thallium] Metody elementoorganicheskoi
khimii; bor, aliuminii, galii, indii, tallii. Moskva,
Izd-vo "Nauka," 1964. 499 p. (MIRA 17:4)

1. Chlen-korrespondent AN SSSR (for Kocheshkov).

IL'KOV, B.F.; KIREYEV, G.A.; LOZOVSKIY, A.T.; LAKHMAN, I.L.; NIKOLAYEV, G.A.;
PAVLUSHCHENKO, Y.P.; ROZHDESTVENSKIY, I.K.; RUVIMSKIY, I.M.; SAVINOV-
SKIY, D.A.; SENCHENKO, Ye.F.; SEREDA, A.S.; SOKOLIK, V.D.; RASSADNI-
KOV, Ye.I., redaktor; SHELYAGINA, A.A., redaktor; LARIONOV, G.Ye.,
tekhnicheskij redaktor

[Operation of the Sredne-Uralsk Hydroelectric Power Station] Opyt
ekspluatatsii Sredne-Ural'skoi GRES. Pod red. E.I. Rassadnikova i
I.K. Rozhdestvenskogo. Moskva, Gos. energ. izd-vo, 1956. 103 p.
(MLRA 10:1)

(Sredne-Uralsk Hydroelectric Power Station)

SOKOLIK, Yu. I.

Cand Med Sci - (diss) "Thoracoplastics in conjunction with pneumoperitoneum in chronic fibroso-cavernous tuberculosis with bilateral disorders of the lungs." Simferopol', 1961. 15 pp; (Ministry of Public Health Ukrainian SSR, Crimean State Med Inst imeni I. V. Stalin); 200 copies; price not given; (KL, 7-61 sup, 262)

GOROVENKO, G. G.; BRUSILOVSKIY, B. M.; LOZOVY, Ye. Kh.; MARSHAK, A. Yu.;
MIKHEL'SON, B. V.; PILIPCHUK, N. S.; SLEPUKHA, I. M.; SOKOLIK, Yu. I.;
TARAPON, Yu. G.; YATSOZHINSKIY, Yu. D.

Results of the use of thoracoplasty and extrapleural pneumolysis
in pulmonary tuberculosis. Probl. tub. no.2:24-29 '62.
(MIRA 15:2)

1. Iz 1-go khirurgicheskogo otdeleniya (zav, - st. nauchnyy sotrud-
nik G. G. Gorovenko) Ukrainskogo nauchno-issledovatel'skogo instituta
tuberkuleza imeni akad. F. G. Yanovskogo (dir. - dotsent A. S.
Mamolat)

(TUBERCULOSIS)
(LUNGS—COLLAPSE)
(CHEST—SURGERY)

SOKOLIK, Z.; HRADEK, V.; ROLLER, J.

Prospects in utilizing coke gas for public use. p. 226.

PALIVA. (Ministerstvo paliv a Ceskoslovenska vedecka technicka spolecnost pro vyuziti paliv pri Ceskoslovenske akademii ved) Praha, Czechoslovakia, Vol. 39, no. 7, July 1959.

Monthly list of East European Accessions (EEAI) LC. Vol. 8, No. 11, November 1959.

uncl.

SOBKOLIK, Zbigniew

The result of the examination is as follows: Neurol.,
1-kg 1961
neurochirurg. psychiat. 1. 1. 1961

1. Z. Sobkolik, ul. Nerwowa Chorych w Warszawie (Dyrektor
dr. med. F. Baumgart).

KLOSS, Maria; SOKOLIK, Zbigniew

Difficulties of differentiation between the child schizophrenia and the schizophrenia-like syndromes on the basis of organic changes in the brain. Neurol. neurochir. psychiat. Pol. 15 no.2: 207-212 Mr-Apr '65.

1. Z Kliniki Psychiatrycznej AM w Warszawie (Kierownik: prof. dr. A. Jus) i z Sanatorium Neuropsychiatrii Dzieciacej w Garwolinie (Kierownik: dr. S. Wawrzynczyk).

L 53040-65 EWT(1)/EWA(h) Feb

ACCESSION NR: AT5010209

UR/3043/65/000/003/0281/0286

AUTHOR: Gorbunov, A. D.; Sokolikhin, A. N.; Tovbis, A. B.

TITLE: Some methods of programmed production of random numbers with an electronic computer

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 3, 1965. Vychislitel'nyye metody i programmirovaniye (Computing methods and programming), 281-286

TOPIC TAGS: random quantity, computer program, random quantity transformation, random number generation₂₅

ABSTRACT: The authors consider two methods for simulating with an electronic computer a random quantity with a uniform distribution law. One is the so-called method of "logical sum," proposed by D. I. Golenko (Vychislitel'naya matematika no. 5, 1959), and is realized by a three-command program requiring one working cell per random number. In this method the length of the aperiodicity section is of the order of 300,00, and for a sampling of 100,000 numbers the mathematical expectation is equal to 0.50154 and the dispersion is 0.08356 (as against the theoretical 0.5

Card 1/2

L 53040-65

ACCESSION NR: AT5010209

and 0.08333). The second method is based on a successive formation of one random number from the other and calls for an algorithm realized by a four-command program using three working cells per random number. For a sample of 100,000 numbers the mathematical expectation was found to be 0.49943 and the dispersion 0.08323. Experiments carried out on the transformation of uniformly distributed random quantity into a quantity with normal distribution have shown that the method produces a good model of a normally distributed random quantity with a minimum number of steps. Orig. art. has: 3 formulas and 3 tables.

ASSOCIATION: Vychislitel'nyy tsentr Moskovskogo universiteta (Computation Center,
Moscow University)

SUBMITTED: 00

ENCL: 00

SUB CODE: MA,DP

NR REF SOV: 004

OTHER: 000

SAB
Card 2/2

L 53031-65 EWT(d) IJP(c)

UR/3043/65/000/003/0287/0292

ACCESSION NR: AT5010210

AUTHOR: Gorbunov, A. D.; Rodin, V. I.; Sokolikhin, A. N.

11
20
3+1

TITLE: On the choice of the degree of polynomial of best mean-square approximation

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 3, 1965. Vychislitel'nyye metody i programmirovaniye (Computing methods and programming), 287-292

TOPIC TAGS: mean square approximation, approximation polynomial, ALGOL 60, computer programming

ABSTRACT: It is shown that if the exact values f_i ($i = 0, 1, \dots, N$) of some function, specified in the form of a table, are distorted with the aid of a table of random values with normal distribution, and if the resultant values \tilde{f}_i ($i = 0, 1, \dots, N$) are used to construct by the method of least squares a polynomial $P_j(x)$ of degree $j = 0, 1, \dots, n$, $n \ll N$, then it becomes possible to calculate both the mean square errors σ_j ($j = 0, 1, \dots, n$) of these polynomials and the mean square deviations α_j of the polynomial $P_j(x)$ from the polynomial $P_{j+1}(x)$ ($j = 0, 1, \dots, n-1$). The authors have prepared 593 plots of σ_j and of α_j and deduce from an

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L 53031-65

ACCESSION NR: AT5010210

analysis that if σ_j has a minimum for a degree j_1 , and α_j has a minimum for a degree j_2 , then the minimum probable error of the degree of the polynomial of best approximation is obtained when $j_1 = j_2 - 1$. An algorithm for the construction of a polynomial of a given degree by the method of least squares is presented in AIGOL-60 language. Orig. art. has: 1 figure, 6 formulas, and 1 table.

ASSOCIATION: Vychislitel'nyy tsentr Moskovskogo universiteta (Computation Center, Moscow University)

SUBMITTED: 00

ENCL: 00

SUB CODE: MA, DP

NR REF SOV: 002

OTHER: 000

BAB
Card 2/2

SOKOLIKHIN, Sergey Ivanovich; ZBOROVSKIY, I., redaktor; TROYANOVSKAYA, N.,
tekhnicheskii redaktor

[Evil geniuses in spite of themselves; capitalistic use of machines]
Zlye genii ponevole; o kapitalisticheskoy primenenii mashin.
Moskva, Gos. izd-vo polit. lit-ry, 1957. 34 p. (MLRA 10:5)
(Machinery in industry)

SOKOLIKHIN, S.I.

ABRAMOV, V.A.; ALEKSEYEV, A.M.; AL'TER, L.B.; ARAKELYAN, A.A.; BAKIANOV, G.I.;
BASOVA, I.A.; BLYUMIN, I.G.; BOGOMOLOV, O.T.; BOR, M.Z.; BREGEL',
E.Ya.; VEYTSMAN, N.R.; VIKENT'YEV, A.I.; GAL'TSOV, A.D.; GERTSOVSKAYA,
B.R.; GLADKOV, I.A.; DVORKIN, I.N.; DRAGILEV, M.S.; YEFIMOV, A.N.;
ZHAMIN, V.A.; ZHUK, I.N.; ZAMYATNIN, V.N.; IGNAT'YEV, D.I.; IL'IN,
M.A.; IL'IN, S.S.; IOFFE, Ya.A.; KAYE, V.A.; KAMENITSER, S.Ye.;
KATS, A.I.; KLIMOV, A.G.; KOZLOV, G.A.; KOLGANOV, M.V.; KONTOROVICH,
V.G.; KRAYEV, M.A.; KRONROD, Ya.A.; LAKHMAN, I.L.; LIVANSKAYA, F.V.;
LOGOVINSKAYA, R.L.; LYUBOSHITS, L.I.; MALYSH, A.I.; MENZHINSKIY,
Ye.A.; MIKHAYLOVA, P.Ya.; MOISEYEV, M.I.; MOSKVIN, P.M.; NOTKIN,
A.I.; PARTIGUL, S.P.; PERVUSHIN, S.P.; PETROV, A.I.; PETRUSHOV, A.M.;
PODGORNOVA, V.M.; RABINOVICH, M.A.; RYVKIN, S.S.; RYNDINA, M.N.;
SAKSAGANSKIY, T.D.; SAMSONOV, L.N.; SMEKHOV, B.M.; SOKOLIKHIN, S.I.;
SOLLERTINSKAYA, Ye.I.; SUDARIKOV, A.A.; TATAR, S.K.; TEREENT'YEV,
P.V.; TYAGAY, Ye.Ya.; FEYGIN, Ya.G.; FIGURNOV, P.K.; FRUMKIN, A.B.;
TSYRLIN, L.M.; SHAMBERG, V.M.; SHAPIRO, A.I.; SHCHENKOV, S.A.;
TYDEL'MAN, B.I.; MEKHIN, P.E.; MITROFANOVA, S., red.; TROYANOVSKAYA, N.,
tekh.n.red.

[Concise dictionary of economics] Kratkiy ekonomicheskii slovar'.
Moskva, Gos.izd-vo polit.lit-ry, 1958. 391 p. (MIRA 11:7)
(Economics--Dictionaries)

Sokolov, A. I.

18 18
Corrosion of steel in the atmosphere of a metallurgical plant. A. V. Shreider and A. I. Sokolov (Steel Inst., Moscow), *Zhur. Priklad. Khim.* 30, 1708-8 (1957). Corrosion was comparatively low near the open-heart furnaces. It was much higher near the pickling baths, and only a little less outside, near the plant. In June and July the relative corrosiveness in these 3 locations was 1:4:8. Expts. in a desiccator showed that HCl in air was more corrosive than SO₂ in air of the same concn. The loss in wt. of Armco steel after 160-hrs. exposure to air contg. 0.02 mg. SO₂/l. or 0.03 mg. HCl/l. was: in 60% humidity, 0.77, 0.86, and 357.90; in 75% humidity, 0.89, 12.48, and 540.13 g./sq. m. I. Benicowitz

5
1-4E2c

RG

S/137/60/000/009/019/029
A006/A001

Information from Referativnyy zhurnal, Metallurgiya, 1960, No. 9 p. 258.
21600

AUTHORS: Studnits, M.A., Konov, Yu.K., Sokolikov, A.I.

TITLE: The Effect of Rare-Earth Elements on the Structure of Fracture and the Structure and Properties of Steel

PERIODICAL: V sb.: Redkozemel'n. elementy v staliyakh i splavakh, Moscow, Metallurgizdat, 1959, pp. 183-195

TEXT: Fractographical and autoradiographical methods were used to study the possibility of preventing intergranular fractures of 25 X HM (25 KHN) steel by introducing rare-earth elements into the steel. Misch metal in amounts (in %) of 0.05; 0.15; 0.30; 0.45 and 0.60 was added to steel. It was found that the addition of 0.2-0.3% rare-earth elements to steel did not considerably affect the distribution of Mo, Cr and P and reduced considerably the inter-dendritic segregation of C and S. Industrial tests on a 30-ton open-hearth furnace showed that

Card 1/2

S/137/60/000/009/019/029

A006/A001

The Effect of Rare-Earth Elements on the Structure of Fracture and the Structure and Properties of Steel

at a heating temperature of 1,550°C the addition of 0.3% misch metal to the steel prevents the formation of intergranular fractures of cast steel. There are 7 references.

I.P.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

SOKOLIKOV, K.I.; MOISEYEV, V.N.

Hot rolling of commercial titanium and some of its alloys. Titan
i ege splavy no. 1:162-179 '58. (MIRA 14:5)

1. Ministerstvo aviatsionnoy promyshlennosti SSSR.
(Titanium) (Rolling (Metalwork))

149T75

149T75

USSR/Medicine - Ulcers, Skin
Dermatology

May/Jun 49

"Treating Chronic Pyococcic Ulcers of the Skin,"
A. I. Sokolin, Cand Med Sci, N-th Evacuation
Hosp, 1/3 p

"Vest Venerol 1 Dermatol" No 3

Most effective treatment for chronic pyococcic
ulcer, used in 60 cases, proved to be a
"leukoplastic" applied once every 5-7 days.
Pus pockets and pouches must be lanced and treated
with 1mm caustic 2-3 days before treatment.
For first 2-3 weeks application of plasters must

149T75

USSR/Medicine - Ulcers, Skin
(Contd)

May/Jun 49

be continued for prophylactic reasons. Average
healing time for these cases was 16.8 days.

149T75

SOKOLIN A. I.

SMELOV, N.S.; YEGOROV, G.I.; KOKOLIN, A.I.; KSANFOPULO, P.I.; RAKHMANOVA, N.V.;
KRYLOVA, Ye.Ye.; RYKOVA, L.K.; PER, M.I.; PETRUSHEVSKIY, S.I.; PUSTOVAYA,
A.I.; TUNGSKOVA, A.I.; VELICHKO, Ye.V.; PLAVIT, P.Ya.; GOL'DENBERG, M.M.

Evaluation of results of the treatment of early syphilis according
to 1949 scheme. Vest. vener., Moskva No.1:29-33 Jan-Feb 52. (CLML 21:4)

1. Professor for Smelov and Per. 2. Central Skin-Venereological Institute
(Director--N.M. Turanov) for Smelov, Yegorov, Sokolin, Ksanfopulo,
Rakhmanova, Krylova and Rykov; Hospital imeni Korolenko (Head Physician
Docent V.P. Volkov) for Per, Petrushevskiy; First Venereological Dis-
pensary (Head Physician--K.A. Vinogradova) for Pustovaya and Tunguskova);
Second Venereological Dispensary (Head Physician--V.G. Bronshteyn) for
Velichko, Plavit and Gol'denberg.

SOKOLIN, A.I.

Brief survey of the work of branches of the All-Union Scientific Society of Dermatologists and Venereologists for 1952. Vest.ven.i
derm.no.1:58-62 Ja-F '54. (MLRA 7:2)

1. Otvetstvennyy sekretar' Vsesoyuznogo nauchnogo obshchestva
dermatologov i venerologov. (Skin--Diseases) (Venereal diseases)

SOKOLIN A.I.

SOKOLIN, A.I., kandidat meditsinskikh nauk; VASIL'YEV, T.V., kandidat meditsinskikh nauk; RAKHMANOVA, N.V., nauchnyy sotrudnik; Prorvich, L.V., nauchnyy sotrudnik

Emonovocillin in the treatment of syphilis. Vest. ven i derm. no. 4: 39-42 J1-Ag '54. (MLRA 7:8)

1. Iz otdela sifilidologii (zav. prof. M.A. Rozentul) Tsentral'nogo nauchno-issledovatel'skogo kozhnovenerologicheskogo instituta (dir. kandidat meditsinskikh nauk N.M. Turanov) Ministerstva zdravookhraneniya SSSR.

(SYPHILIS, therapy,

*penicillin, procaine, with ekmolin)

(PENICILLIN, derivatives,

*procaine penicillin, ther. of syphilis, with ekmolin)

(ANTIBIOTICS, therapeutic use,

*ekmolin in syphilis, with procaine penicillin)

203 A.1
MALYKIN, R.Ya.; SOKOLIN, A.I.; BRAYTSEV, A.V.; RAKHMANOVA, N.V.

Higher nervous function in latent syphilitic meningitis. Zhur.vys.
nerv.deiat. 4 no.5:629-241 S-O '54. (MLRA 8:7)

1. Laboratoriya patofiziologii i otdel sifilidologii Tsentral'nogo
kozhno-venerologicheskogo instituta Minzdrava SSSR.

(SYPHILIS,
meningeal, conditioned reflex higher nervous funct.test)
(REFLEX, CONDITIONED, in various diseases,
syphilis of meninges, higher nervous funct. test)
(MENINGES, diseases,
syphilis, conditioned reflex higher nervous funct.test)

SOKOLIN, A.I.

ROZENTUL, M.A., professor; VASIL'YEV, T.V., kand. med. nauk; SOKOLIN, A.I.,
kand.med.nauk; RAKHMANOVA, N.V., nauchn.sotr.; PRORVICH, L.V., nauchn.
sotr.; ZLATKINA, A.R., nauchn.sotr.; ARNOL'D, V.A., vrach; PETRUSHEV-
SKIY, S.I., vrach; PLAVIT, P.Ya., vrach; VELICKHO, E.V., vrach; GLOBUS,
R.E., vrach; GOL'DENBERG, M.M., vrach; TUNGUSKOVA, A.I., vrach

Results of treating syphilis according to the 1949-1951 programs. Vest.
ven. i derm. no.1:22-25 Ja-F '55. (MIRA 8:4)

1. Bol'nitsa im. Korolenko (for Arnol'd, Petrushevskiy) 2. 1-y i 2-y
kozhno-venerologicheskiye dispansery (for Plavit, Velichko, Globus,
Gol'denberg, Tunguskova) 3. Iz otdela sifilidologii (zaveduyushchiy
professor M.A.Rozentul) TSentral'nogo kozhno-venerologicheskogo insti-
tuta (direktor - kandidat meditsinskikh nauk N.M.Turanov) Ministerstva
zdravookhraneniya SSSR.

(SYPHILIS, therapy
in Russia, pattern of ther.)

SOKOLIN, A.I.

Brief review of the activity of the branches of the All-Union
Scientific Society of Dermatologists and Venereologists for 1953.
(MLRA 8:4)
Vest. ven. i derm. no.1:55-59 Jan '55.
(DERMATOLOGY--SOCIETIES) (VENERELOGY--SOCIETIES)

ROZENTUL, M.A., professor; VASIL'YEV, T.V., kandidat meditsinskikh nauk;
SOKOLIN, A.I., kandidat meditsinskikh nauk; MASLOV, P.Ye., kandidat
meditsinskikh nauk; PRORVICH, L.V., kandidat meditsinskikh nauk;
PAKHMANOVA, N.V. Pakhmanova, nauchnyy sotrudnik; KHAMAGANOVA, A.V.,
nauchnyy sotrudnik; PETRUSHEVSKIY, S.I., vrach

Treatment of syphilis with ecomonovocillin. Sov.med. 20 no.7:24-28
Jl 1956. (MLRA 9:10)

1. Iz otdela sifilidologii (zav. - prof. M.A.Rozentul) TSentral'nogo
kozhno-venerologicheskogo instituta (dir. - dotsent N.M.Turanov)
Ministerstva zdravookhraneniya SSSR.

(SYPHILIS, ther.

procaine penicillin G with ekmolin)

(PENICILLIN, rel. cpds.)

procaine penicillin G with ekmolin in ther. of syphilis)

SOKOLIN, A.I.

Activity report of the All-Union Medical Society of Dermatologists
and Venereologists during 1954. Vest. ven. i derm 30 no.1:57-62
Ja-F '56 (MIRA 9:4)

1. Sekretar' Vsesoyuznogo nauchnogo meditsinskogo dermatovenerologicheskogo obshchestva.
(DERMATOLOGY--SOCIETIES) (VENEREOLGY--SOCIETIES)

SOKOLIN, A.I., kandidat meditsinskih nauk

The state of the higher nervous activity in latent (asymptomatic)
syphilitic meningitis. Vest.ven. i derm. 30 no.4:21-24 J1-Ag '56.
(MIRA 9:10)

1. Iz otdela patofiziologii (zav. - prof. R.Ya.Malykin) i otdela
sifilidologii (zav. - prof. M.A.Rozentul) Tsentral'nogo nauchno-
issledovatel'skogo kozhno-venerologicheskogo instituta (dir. -
dotsent N.M.Turanov) Ministerstva zdravookhraneniya SSSR.

(MENINGITIS, etiol. and pathogenesis
syphilis, higher nerv. funct. in)

(SYPHILIS, compl.
meningitis, higher nerv. funct. in)

(CENTRAL NERVOUS SYSTEM, physiol.
higher nerv. funct., eff. of meningitis caused by
syphilis)

SOKOLIN, A. I.

"The Treatment of Patients with Chancroid," p. 85

Handbook on the Organization of the Control of Venereal and Infectious Skin Diseases, Moscow, Medgiz, 1957 edited by N.M. Turanov and A.A. Studnitsin

SOKOLIN, A.I., kand.med.nauk

Remote results of treating syphilis. Vest.derm. i ven. 31 no.2:29-34
Mr-Apr '57. (MIRA 12:12)

1. Iz otdeleniya sifilidologii (zav. - prof. M.A. Rozentul) Tsentral'-
nogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta
Ministerstva zdavookhraneniya RSFSR (dir. - kand.med.nauk N.M. Turanov).
(SYPHILIS, ther.
follow up)

USSR/Human and Animal Physiology - (Normal and Pathological).
Nervous System. Electroencephalogram of Man.

T

Abs Jour : Ref Zhur Biol., No 4, 1959, 17949

Author : Malykin, R.Ya., ~~Sokolin, A.I.~~, Vasil'yev, T.V.

Inst : -

Title : The Significance of Electro Encephalography for Evaluation of the Course and Treatment of Syphilis and Neurosyphilis.

Orig Pub : Vestn. dermatol. i venerol., 1958, No 2, 36-46

Abstract : No abstract.

Card 1/1

ROZENTUL, M.A., prof.; VASIL'YEV, T.V., kand.med.nauk; MASLOV, P.Ye., kand.med.nauk; ROBUSTOV, G.V., kand.med.nauk; SOKOLIN, A.I., kand.med.nauk; RAKHMANOVA, N.V., nauchnyy sotrudnik; KHAMAGANOVA, A.V., nauchnyy sotrudnik; PETRUSHEVSKIY, S.I., vrach; TUNGUSKOVA, A.P., vrach; VELICHKO, E.V., vrach; GLOBUS, R.E., vrach; GOL'DENBERG, M.M., vrach.

Combined treatment of syphilis with several antibiotics [with summary in English]. Vest.derm. i ven. 32 no.1:42-47 Ja-F '58. (MIRA 11:4)

1. Iz otdela sifilidologii (zav.-prof. M.A.Rozentul) TSentral'nogo kozhno-venerologicheskogo instituta (dir.-kandidat meditsinskikh nauk N.M.Turanov) Ministerstva zdravookhraneniya RSFSR. 2. Bol'nitsa imeni Korolenko (for Petrushevskiy)

(SYPHILIS, ther.

antibiotics in combination (Rus)

(ANTIBIOTICS, ther. use

syphilis, combined antibiotics (Rus)

PAVLOV, S.T.; SOKOLIN, A.I.

Report on the work of the All-Union Scientific Medical Society of
Dermatologists and Venereologists in 1956. Vest.derm. i ven. 32
no.1:83-87 Ja-F '58. (MIRA 11:4)

(DERMATOLOGY) (VENEREOLOGY)

MALYKIN, R.Ya., prof.; SOKOLIN, A.I., starshiy nauchnyy sotrudnik; VASIL'YEV,
T.V., starshiy nauchnyy sotrudnik

Importance of the EEG in evaluating the course & treatment of syphilis
& neurosyphilis [with summary in English]. Vest.derm. i ven. 32 no.2:
36-46 Mr-Apr '58. (MIRA 11:4)

1. Iz otdela patofiziologii (zav. - prof. R.Ya.Malykin) i otdela
sifilidologii (zav. - prof. M.A.Rozentul) Tsentral'nogo nauchno-
issledovatel'skogo kozhno-venerologicheskogo instituta (dir. - kandi-
dat med.nauk N.M.Turanov) Ministerstva zdravookhraneniya RSFSR

(SYPHILIS, manifest.

EEG, value in diag. & ther. control (Rus))

(NEUROSYPHILIS, manifest.

same)

(ELECTROENCEPHALOGRAPHY, in var. dis.
syphilis & neurosyphilis (Rus))

Саксина, А. И., doc Med Sci -- (diss) "Evaluation of syphilis therapy on the basis of the study of remote results in the treatment of patients in the years 1890-1947." Voronezh, 1960. 14 pr; (Voronezh State Medical Inst); 300 copies; price not given; (HL, 21-22, 129)

SOKOLIN, A.S.

Two classes of methods for summin divergent series. Usp.mat.nauk
12 no.3:381-384 My-Je '57. (MIRA 10:10)
(Series, Divergent)

AUTHOR: SOKOLIN, A.S.

42-1-5/13

TITLE: On Some Classes of Summation Methods of Divergent Series
(O nekotorykh klassakh metodov summirovaniya raskhodyashchikhsya ryadov)

PERIODICAL: Uspekhi Matematicheskikh Nauk, 1958, Vol.13, Nr.1, pp.193-200 (USSR)

ABSTRACT: The author proposes a number of summation methods and compares them with the methods of Euler, Hardy-Littlewood, Meyer-König, Borel, Obrechhoff etc. The regularity is proved and from the summability with respect to the one method the summability with respect to the other method is concluded. Altogether the author considers 15 methods and he formulates 24 stereotyped theorems.
1 Soviet and 6 foreign references are quoted.

SUBMITTED: 14 March 1956

AVAILABLE: Library of Congress

Card 1/1 1. Mathematics-Theoretical analysis

11 (5)

AUTHORS:

Slobodkin, M. S., Engineer, Sokolin,
G. F., Engineer

SOV/119-59-7-5/18

TITLE:

Control Membrane Valves of Low Delivery

PERIODICAL:

Priborostroyeniye, 1959, Nr 7, pp 14-16 (USSR)

ABSTRACT:

In table 1 the specific capacities C are given for 12 different control membrane valves with different clear opening diameters, which were worked out at the Spetsial'noye konstruktorskoye byuro po avtomatike v neftepererabotke i proizvodstve iskusstvennogo zhidkogo topliva (Special Construction Office for the Automation of Petroleum Refining and the Industry of Artificial Liquid Fuels), and it is stated that diaphragms of low delivery are those in which the specific capacity is lower than 4. Specific capacity is the delivery of an incompressible liquid with the specific weight 1 in cubic meters per hour at a pressure difference of 1 atm before and behind the diaphragm. In recent times, such valves were produced at the Lenneftekip plant, which have a C of from 0.5-1.0. In the above-mentioned construction office valves with the C of 0.1-0.25 were projected, and the problems to be solved in this connection concerning the range of the coefficient C, the clearance, the

Card 1/2

Control Membrane Valves of Low Delivery

SOV/119-59-7-5/18

control of C, etc are discussed. On the basis of figures 1 and 2 the essential components of the valve-types UKS and UKN are discussed and their mode of operation is explained in detail. The construction is characterized by a maximum standardization of the units and single parts of the various types, and three different types are mentioned as examples, which differ solely by the choke system. At present, work is being carried out for the purpose of increasing working temperature, the resistivity to erosion, and working pressure. There are 2 figures, 5 tables, and 1 Soviet reference.

Card 2/2

17.1100
17.8100

29329
S/119/61/000/010/001/008
D209/D303

26.2190

AUTHORS:

Nisman, L.N., and Sokolin, G.F., Engineers

TITLE:

On a method of choosing pneumatic diaphragm actuators

PERIODICAL:

Priborostroyeniye, no. 10, 1961, 5 - 7

TEXT:

The authors present a mathematical treatment of the effective area of an elastic diaphragm, utilized in pneumatic diaphragm-spring actuators operating in conjunction with regulating elements. In an ideal case when the unbalance and friction in the regulator amount to zero, the stem travel corresponds to the commanding air pressure. In an actual case, however, the thrust due to change of pressure Δp , (stem held in position), is given by

$$Q_{\Delta p} = q (h - \Delta h) + N, \quad (3)$$

where q - stiffness of return spring; N - force determined by the amount of unbalance and friction; Δh - absolute error of positioner; h - stem travel due to Δp . Since in an ideal case $Q_{\Delta p} = qh$, where $Q_{\Delta p}$ - force

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On a method of choosing ...

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developed by the sensing element due to Δp when the stem is held in position, the relationship

$$\delta = \frac{N}{Q_{\Delta p}} \quad (6)$$

is obtained, where $\delta = \Delta h/h$. This thrust is also given by

$$Q_{\Delta p} = F_{\text{eff}} \Delta p, \quad (7)$$

where F_{eff} - effective area of the sensing element (diaphragm) = $1/3F$, where F is the calculated area of diaphragm ($\pi D^2/4$), assuming that the diaphragm has a support at the center. In practical actuators, the diaphragm (radius R) is supported by a concentric disc of radius r . Assuming that the surface of the disc lies in the plane of the diaphragm mounting, an expression for the theoretical effective diaphragm area (F_{teff})

$$F_{\text{teff}} = \frac{1 + \beta + \beta^2}{3} F = K_{\beta} F, \quad (15)$$

Card 2/4

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D209/D303

On a method of choosing ...

is devised, where $\beta = \frac{d}{D}$ ($r = \frac{d}{2}$; $R = \frac{D}{2}$) and $K_\beta = \frac{1 + \beta + \beta^2}{3}$. This expression is derived by integrating from r to R the infinitesimal thrusts acting on an infinitesimal laminar ring of the diaphragm area and adding the resulting thrust to the force acting on the disc to pressure p . This equation holds for absolutely elastic diaphragms only. The actual effective diaphragm area with a supporting disc is

$$F_{teff} = K K_\beta F, \quad (16)$$

where K - practical correction factor: (position of the disc, material of diaphragm, its form, thickness, stiffness, mounting etc.) For each unit the factor K is determined from a graph $h = f(p)$ according to

$$K = 1 \pm \frac{\Delta h}{h}. \quad (19)$$

The effective area of the sensing element with a two-contour diaphragm mounting is given. An actuator should be so chosen that the ratio of unbalance

Card 3/4

On a method of choosing ...

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S/119/61/000/010/001/008
D209/D303

and friction forces N in the regulator to the force $Q_{\Delta p}$ does not exceed
a given relative error δ of the positioner. There are 3 figures and 1
Soviet-blos reference.

✓

Card 4/4

DELOZERSKIY, S.S., inzh.; VAYNBERG, I.B., inzh.; SOKOLIN, G.F., inzh.;
DAVYDENKOV, A.K., inzh.

Using chromatographs. Mekh. i avtom. proizvod. 19 no.4:41-42
Ap '65. (MIRA 18:6)

SOKOLIN, G.L., redaktor; ROMANOVA, N.V., redaktor; TROFIMOV, A.V.
tekhnicheskii redaktor.

[Progressive work methods at petroleum industry construction sites] Peredovye metody rabot na stroikakh neftianoi promyshlennosti. Moskva, Gos.nauchno-tekhn.izd-vo neftianoi i gorno-toplivnoi lit-ry, 1954. 62 p. (MLA 8:11)

1. Moscow. Tsentral'naya normativno-issledovatel'skaya stantsiya po stroitel'stvu "T₁NISSTROINEFT".
(Petroleum engineering) (Building)

SOKOLIN, Gerts Lazarevich; UDOD, V.Ya., redaktor; STRONIN, A.M. inzhener
redaktor; TOKER, A.M., tekhnicheskly redaktor.

[Plastering, painting and glazing in farm construction] Shtuka-
turnye, maliarnye i stekol'nye raboty v sel'skom stroitel'stva.
Moskva, Gos.izd-vo lit-ry po stroit. i arkhitekt. 1955. 93 p.
(Farm buildings) (MLRA 8:8)

GALAKTIONOV, Aleksandr Alekseyevich, kand. arkhitektury; PITSKEL', Lev Naumovich, kand. tekhn. nauk; SOKOLIN, Gerts Lazorevich, inzh., red.; SHAPIRO, Il'ya Grigor'yevich, inzh.; ~~YIDINOV~~, Yu.S., nauchnyy red.; SOKOLOVA, M.A., red.; RAKOV, S.I., tekhn. red.

[Handbook for young plasterers] Spravochnik molodogo shtukatura. Pod obshchei red. G.L. Sokolina. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1958. 278 p. (MIRA 11:7)
(Plastering)

SOKOLIN, G., inzh.

Synthetic varnish paints substitute oil paints. Na stroi. Mosk.

1 no.7:17 JI '58.

(MIRA 11:9)

(Painting, Industrial)

SOKOLIN, G., inzh.

Powerlike retarder used in hardening gypsum. Na stroi. Mosk.
2 no.3:23 Mr '59. (MIRA 12:5)
(Gypsum)

GALAKTIONOV, Aleksandr Alekseyevich, kand. arkhitektury; PITSKEL', Lev Naumovich, kand. tekhn. nauk; SOKOLIN, Gerts Lazarevich, inzh.; SHAPIRO, Il'ya Grigor'yevich, inzh.; TARUTIN, N.P., nauchnyy red.; BEREZOVSKAYA, A.L., ved. red.; PEREDERIY, S.P., tekhn. red.; BARANOVA, N.N., tekhn. red.

[Handbook for the young plasterer] Spravochnik molodogo shtukatura.
By A.A.Galaktionov i dr. Izd.2., ispr.i dop. Moskva, Vses.uchebno-
pedagog.izd-vo Proftekhizdat, 1961. 278 p. (MIRA 14:12)
(Plastering)

SAMET, M.O., inzh.; SOKOLIN, G.L., inzh.; CHEKHOVSKAYA, T.P., red. izd-
va; OSENKO, L.M., tekhn. red.

[Plastering] Shtukатурные работы. Izd. 2., ispr. i dop. Moskva,
Gosstroizdat, 1962. 251 p. (MIRA 15:9)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut orga-
nizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.
(Plastering)

SIDORIN, Gavriil Vladimirovich; MELEKHOV, Nikolay Yakovlevich;
SOKOLIN, G.I., nauchn. red.; NAZARENKO, M.I., red.

[Vocational training of tile layers] Proizvodstvennoe
obuchenie oblitsovshchikov. Moskva, Vysshaia shkola,
1965. 61 p. (MIRA 18:7)

SOKOLIN, KH. G., CAND GEOL-MIN SCI, "GEOLOGICAL AND
GEOCHEMICAL ~~FORMATION~~ ^{signature of} CONDITIONS OF PETROLEUM AND GAS
DEPOSITS IN ARCHEDIN-DONSKIY RAYON (STALINAGRADSKAYA
OBLAST)." MOSCOW, 1961. (MIN OF HIGHER AND SEC SPEC
ED RSFSR, MOSCOW ORDER OF LABOR RED BANNER INST OF PETRO-
CHEM AND GAS INDUSTRY IM I. M. GUBKIN). (KL, 3-61, 208).

EVENTOV, Ya.S.; RAKITOV, A.I.; PRONICHEVA, M.V.; SAZONOVA, I.G.;
SOKOLIN, Kh.G.; TSIBIZOV, G.G.

Trends in prospecting for oil and gas in Astrakhan Province and
the northeastern Kalmyk A.S.S.R. Geol.neft i gaza 6 no.10:41-46
0 '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut, Moskva.

(Astrakhan Province--Prospecting)

(Kalmyk A.S.S.R.--Prospecting)

AYZHENETI, A.A.; LUBININ, A.Z.; YENIKHEYEV, P.N.; MAKIMOV, S.F.;
BOVA, Ya.A.; SOKOLEN, Kh.G.; EVENTOV, Ya.S.; EZDRIN, M.B.;
MULIKOV, R.B.

Outlooks of a new oil and gas producing center in the Caspian
lowland and adjacent regions. Geol. nefti i gaza 9 no.1:1-8
Jan '65. (MIRA 18:3)

1. Gosudarstvennyy geologicheskii komitet SSSR; Vsesoyuznyy
neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut,
Leningrad; Vsesoyuznyy nauchno-issledovatel'skaya geologorazve-
dochnyy neftyanoy institut, Moskva; Nauchno-issledovatel'skaya
laboratoriya geologicheskikh kriteriyev otsenki perspektiv
neftegazonosnosti i Nizhnevolzhskiy nauchno-issledovatel'skiy
institut geologii i geofiziki.

. Okoln, I., Inzh.

Repairing the crankcase of steering bevel gears of the GAZ motor
vehicles. Avt. transp. 43 no. 9:28-30 S '65. (MIRA 18.7)

SOKOLIN, M.L.; SOLOMONIK, S.S.; TARABRINA, V.M.; SHMELEVA, M.N.

Treatment of pyoderma patients with bicillin-3. Sov.med. 25 no.2:
138 F '61. (MIRA 14:3)

1. Iz polikliniki Ramenskogo meditsinskogo ob'yedineniya, mediko-
sanitarnoy chasti tekstil'nogo kombinata "Krasnoye znamya" i gorod-
skoy polikliniki g. Zhukovskogo.
(PENICILLIN) (SKIN--DISEASES)

KATS, A., SOKOLIN, S.

Repairing the body of M-20 automobiles in VARZ plants. Avt.
transp. 34 no.7:23-25 J1 '56. (MLRA 9:10)

(Automobiles--Bodies)

8(0), 11(4)

SOV/112-59-4-7661

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4,
pp 173-174 (USSR)

AUTHOR: Belozerskiy, S. S., and Sokolin, Sh. L.

TITLE: Devices and Means of Automation in the Petroleum Industry

PERIODICAL: V sb.: Avtomatiz. khim. i koksokhim. proiz-v. M., Metallurgizdat,
1958, pp 298-353

ABSTRACT: The following special devices and controllers developed by KBNP are briefly described: a liquid-level controller for high-pressure apparatus; a pneumatic controller, a controller for low-discharge liquid or gas flow, an ARDGT-55 gas-pressure automatic controller, a DRD differential pressure controller, MRK-VS membrane-type high-pressure controlling valves for viscous media and for subzero-temperature media, stop valves in an automatic interlocking scheme, controlling shutters, a rotameter with an RMII-25 pneumatic transmission, a position indicator for a UPKG gas holder bell, an electronic recording pH-meter with a dynamic condenser, a portable pH-meter. Forty-four illustrations.

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A.A.S.

34781
S/118/62/000/003/004/005
D221/D302

5.1500 (2110 5419)

AUTHORS: Vaynberg, I.B., and Sokolin, Sh.L., Engineers

TITLE: Instruments for the automation of oil refineries

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 3,
1962, 37 - 40

TEXT: The special design office for automation of oil refining has developed several special instruments. The ДП-320 (DP-320) transducer measures pressure drop up to 50 kg/cm² with a static pressure of 320 kg/cm². Use of thick-walled diaphragms permits measurement of pressure drop in gases with a high content of hydrogen. The transducer operates on the principle of force compensation. The transducer ДИУУ (DIUU) is applied for measuring liquid levels at pressures of 320 and 700 kg/cm². It is formed by a chamber with a weight suspended on a spring. The weight carries a core travelling in a nonmagnetic austenitic steel sleeve. The level difference produces a shift of core in respect of the induction coil. For remote control of liquid level the electric indicator УЭД-2 (UED-2) is

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Instruments for the automation of ...

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used which operates at atmospheric or low (up to 6 kg/cm^2) pressures and in vacuum. Its operation is based on the servo-system. The float actuates a reversible motor which rotates the drive roller, drum of the level counter and the rotation of the transmitting syn. The unit is made in an explosion-proof design. The level indicator УЭД-3 (UED-3) with a coded telemetering system can be connected to 99 points by a selector switch. The main design is similar to UED-2. A prototype series of these instruments is installed in storage compounds at the Novoufimsk and Odessa refineries. The flowmeter for remote indications is particularly suitable for liquid naphthalene at 120°C . The transducer coil is placed inside the flow, and connected to a differential transformer instrument. The unit comprises an amplifier and a mechanism with a reversible motor actuating the core of the indicating and recording coils. The amplified voltage is proportional to the displacement of the core, whereas its phase is a function of core travel from its mean position. The meter is provided with a steam jacket to prevent the crystallization of the product. The valve KB (KV) for viscous media has an angular shape and contains a single poppet. The liquid flow

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Instruments for the automation of ...

S/118/62/000/003/004/005
D221/D302

ensures the balance of the valve as well as the cleaning of the chambers. The flow is proportional to the plunger motion. The displacement of the valve depends on the change of pressure in the bellows of the position relay. The use of these valves at Moscow oil refinery ensured the automatic control of the level of the cracking residue. There are 5 figures.

X

Card 3/3

KAMENETSKIY, B.L., inzh.; SOKOLIN, Sh.L., inzh.

Control of pump delivery. Mekh. i avtom. proizv. 17 no.8;
9-11 Ag '63. (MIRA 16:10)

SOKOLIN, Ya.B.

Some results of observations on waves in Lake Beloye. Trudy Okean
kom. 9:178-180 '60. (MIRA 14:1)
(Beloye, Lake (Vologda Province)--Waves)

FRADKIN, S.A., inzh.: BOGOLUB, Ya.F., inzh.: LAROVINA, N.S., inzh.:
GOFENKHEFER, A.F., inzh.

Manufacture of standard wire-reinforced concrete beams and
i zhel.-bet. no. 7-315-319 J1 '61. (MIRA 1A:7)
(Beams and girders)

L 26516-66 EWP(m)/EWT(1)/EWT(m)/T IJP(c) DJ

ACC NR: AP6011524

SOURCE CODE: UR/0382/66/000/001/0150/0151

AUTHOR: Sokolin, Ya. I.

ORG: none

TITLE: Magnetohydrodynamic metering device

SOURCE: Magnitnaya gidrodinamika, no. 1, 1966, 150-151

TOPIC TAGS: flow meter, flow measurement, mhd flow, liquid metal, liquid metal pump, ^{electric relay}

ABSTRACT: The author describes the results obtained with the first experimental model of a universal magnetohydrodynamic metering device for automatically feeding a pressure-casting machine. The device meters exact batches of liquid aluminum or zinc alloy with mass from 0.4 to 4 kg (Fig. 1). The theory and description of this device were previously given elsewhere (Collection: Avtomaticheskaya dozirovka i transportirovaniye zhidkogo metalla [Automatic Metering and Transportation of Liquid Metal], L., Izd. TsBTI, 1964, p. 21). The meter employs a three-phase linear induction pump designed by the Institute of Physics of the Latvian Academy of Sciences, developing a pressure of approximately $5 \times 10^4 \text{ N/m}^2$. The drop in the liquid-metal level as the metal is consumed is compensated for by increasing the time of feeding each successive batch of metal. This is controlled by an electronic relay. Preliminary tests of the metering device have been found to be satisfactory. Orig. art. has: 1 figure.

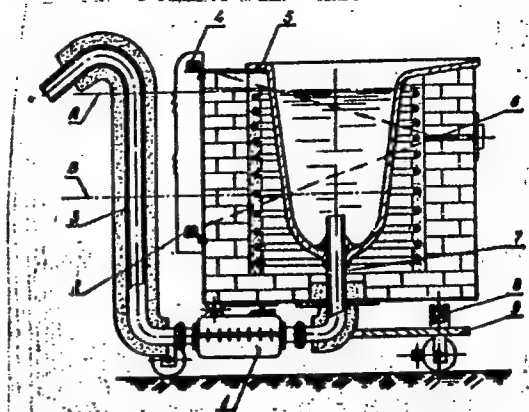
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UDC: 621.74: 538.4

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ACC NR: AP6011524

Fig. 1. Liquid metal metering device.
1 - Electromagnetic pump, 2,4 - counter,
3,7 - metal pipes, 5 - crucible flange,
6 - capsule, 8 - jack, 9 - carriage.



SUB CODE: 20/ SUBM DATE: 02Sep65/ ORIG REF: 003

Card 2/2 *cc*

1. SOKOLIN Z.I., KOL' A.A.

2. USSR (600)

4. Moscow tractor, Gor.khoz.Mosk, no.6, 1949.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

SOKOLIN, Z. L.

New testing station at the VARZ Plant. Avt. transp. 37 no.8:33
Ag '59. (MIRA 12:12)

(Automobiles--Engines--Testing)

LIKHTENSHTEYN, G.I.; SOKOLINA, E.A.

Critical phenomena in the oxidation of hydrocarbons in the presence of
some antioxidants. *Zhur.fiz.khim.* 37 no.7:1594-1597 J1 '63.
(MIRA 17:2)

I. Institut khimicheskoy fiziki AN SSSR.

SOKOLINA, E.L.; DANTSIG, I.I.

Errors in the diagnosis of tuberculosis and nontuberculous lung diseases. Probl.tub. no.7:12-17 '62. (MIRA 15:12)

1. Iz gospitalya dlya lecheniya invalidov Otechestvennoy voyny (glavnyy vrach - zasluzhennyy vrach RSFSR N.N.Shatalov), Leningrad.

(TUBERCULOSIS) (LUNGS--DISEASES)

15(8)

SOV/20-127-2-19/70

AUTHORS:

Krotova, N. A., Morozova, L. P., Sokolina, G. A.

TITLE:

The Mechanical Properties of the Adhesion of Polymers

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 2, pp 302-305
(USSR)

ABSTRACT:

In the introduction it is stated that the methods used hitherto for investigating polymer adhesion are deficient. A new "adhesiometer" is described which enables the determination of the separating work of two bodies by means of an adjustable velocity, and permits recording of voltage-oscillations during separation. A scheme of this instrument is given in figure 1. An electric resistance tensiometer is used for the determination of voltage fluctuations. After a general discussion of the "adhesiometer" the experimental results are given. First, the oscillograms shown in figure 3 of the systems gutta percha - steel, and ether of cellulose plus benzyl alcohol - steel are discussed. Subsequently, experiments are described which were made in order to investigate the separation of two telescoped cylinders connected by a layer of polymers 200 - 300 μ thick. In these experiments the separation was recorded by means of a

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The Mechanical Properties of the Adhesion of Polymers SOV/20-127-2-19/70

cinematic camera. The change in voltage and in the distance between the two cylinders is shown in two diagrams (Fig 4). From results obtained in this manner the authors assume that a separating stress may be determined simultaneously with the separating work. Yu. M. Kirillova, N. Ye. Golynskaya and B. A. Fadeyev assisted in the investigation. The authors thank B. V. Deryagin for his advice. There are 4 figures, 1 table, and 7 references, 6 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR
(Institute of Physical Chemistry of the Academy of Sciences,
USSR)

PRESENTED: March 28, 1959, by P. A. Rebinder, Academician

SUBMITTED: March 25, 1959

Card 2/2

TOPOROV, Yu.P.; SOKOLINA, G.A.

Tribometric method of determining the purity of metallic and other
surfaces before painting. Lakokras.mat. 1 ikh prim. no.4:63-65 '60.
(MIRA 13:10)

(Surfaces-(Technology)) (Painting, Industrial)

24.2400
15.1100

25687
S/181/61/003/007/009/023
B102/B214

AUTHORS: Krotova, N. A., Morozova, L. P., and Sokolina, G. A.

TITLE: Investigation of adhesive binding of solid bodies

PERIODICAL: Fizika tverdogo tela, v. 3, no. 7, 1961, 1999-2009

TEXT: In an earlier paper, the authors investigated the electrical nature of adhesion phenomena which are based on the formation of an electric double layer. The mechanism of formation of this double layer is different for different systems. The authors now investigate the character of adhesive binding for semiconductors, dielectrics, and metals, and determine the adhesion characteristics of these solids by means of mechanical and optical methods. The measurements were made by a universal adhesiometer of the type A3C-1 (AZS-1), constructed in the authors' laboratory. As usual, adhesion is characterized by the rupture energy. The new instrument permits the determination of the rupture energy, the specific rupture stress, as well as the mechanical properties of the joined materials. The instrument is schematically shown in Fig. 1. On the stand (1) there is an element (2) moving up and down and connected with the lower clamp which is

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